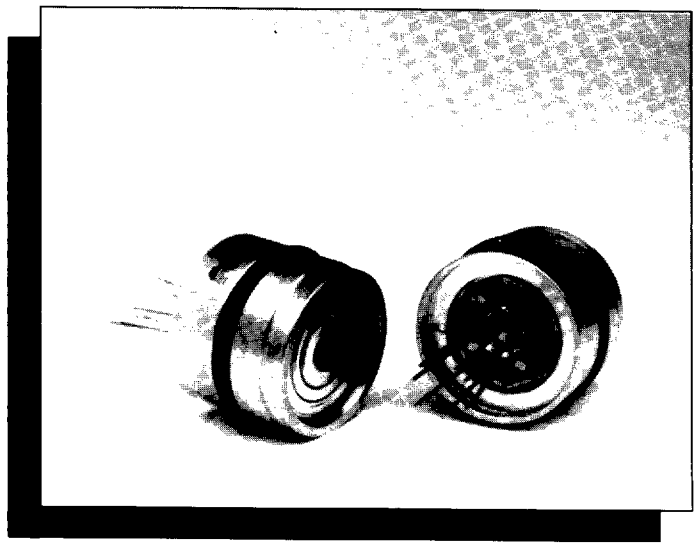
OEM Pressure Sensor Gage and Absolute Sealed Gage Stainless Steel Diaphragm Interchangeable



Features

- Iso-Pressure Structure
- Solid-State Reliability
- ±0.25% Accuracy
- Flush Diaphragm
- ±1% Normalized Output Span
- Temperature Compensated
- Infinite Resolution
- Low Cost
- Serialized

Typical Applications

- Medical
- Air Conditioning
- Process Control
- Oceanography
- Liquid Level
- Environmental Control
- Water Management
- Refrigeration
- Food Processing
- Agricultural Sprayers
- Fluid Power

Description

The Models 151 and 154 are solid-state pressure sensors that utilize a 316 stainless steel housing to provide compatibility with most harsh media. Both models are designed to be mounted by using either a weld seal or an O-ring as a face seal or bore seal to maintain pressure integrity.

For the Model 151, temperature compensation and calibration over 0-50° C is accomplished with the addition of only three external resistors, the values of which are included with each sensor.

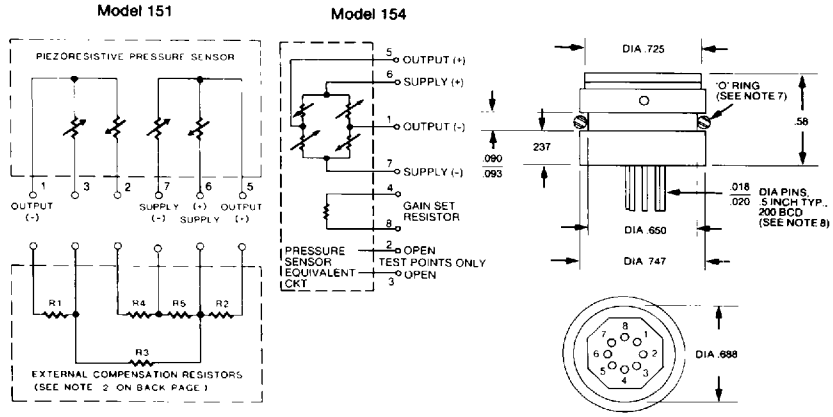
For the Model 154, integral temperature compensation is provided along with calibration over 0-50° C with laser trimmed resistors. No external resistors are required. An additional resistor is included to normalize pressure sensitivity variations by programming the gain of an external amplifier, thus providing ±1% interchangeability along with high level output.

One performance grade is available in gage, sealed gage and absolute pressure from 0-5 psi to 0-300 psi. Each sensor is individually serialized.

Standard Ranges

0 to 5 psig		0 to 5 psia
0 to 15 psig	0 to 15 psis	0 to 15 psia
0 to 30 psig	0 to 30 psis	0 to 30 psia
0 to 50 psig	0 to 50 psis	0 to 50 psia
0 to 100 psig	0 to 100 psis	0 to 100 psia
0 to 300 psig	0 to 300 psis	0 to 300 psia

Connections/Dimensions



ALL DIMENSIONS ARE IN INCHES

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Performance Specifications

Supply Current = 1.5 mA & Ambient Temperature = 25°C (Unless otherwise specified)

PARAMETER	MIN	TYP	MAX	UNITS	NOTES
Full Scale Output Span	50	100	200	mV	
Amplifier Output Span	2.98	3.01	3.05	V	3
Zero Pressure Output		1	2	±mV	2,3,4
Static Accuracy			0.25	±% Span	5
Input & Output Resistance		5000	6000	Ω	
Temperature Coefficient - Span			1.0	±% Span	1,2,3
Temperature Coefficient - Zero			1.0	±% Span	1,2,3
Supply Current	0.5	1.5	2.0	mA	
Output Load Resistance	2			MΩ	
Insulation Resistance (50 VDC)	50			MΩ	
Pressure Overload			3X	Rated	6
Operating Temperature	-10°C to + 80°C				
Storage Temperature	-40°C to +125°C				
Media	Compatible with 316 Stainless Steel				
Weight	24 Grams				

Notes

1. Temperature Range: 0-50°C in reference to 25°C.
2. For Model 151, with external resistors (R1 or R2), (R3 or R4) and R5 included in circuit on Front Page. If R1 is required then R2 is left open (R2 = ∞) and vice versa. If R3 is required then R4 is a short (R4 = 0) and vice versa. See Application Note TN-002. A computer printout is supplied with each sensor detailing the values of the three required external resistors along with open and short information for the other two locations.
3. For Model 154, compensation resistors are an integral part of the sensor package. No additional external resistors are required. Model 154 is interchangeable only when used with a gain stage as shown in Figure 1; see Application Note TN-003.
4. Measured at vacuum for absolute (A), ambient pressure for gage (G) and one standard atmosphere for sealed gage (S).
5. Includes repeatability, linearity (best fit straight line) and pressure hysteresis.
6. 20 psi for 5 psi version; 3X or 450 psi, whichever is less, for other versions.
7. O-ring dimensions: I.D. 0.614" x 0.070".
8. Model 154 has 8 pins. Model 151 has 6 pins (pins 4 and 8 are deleted).

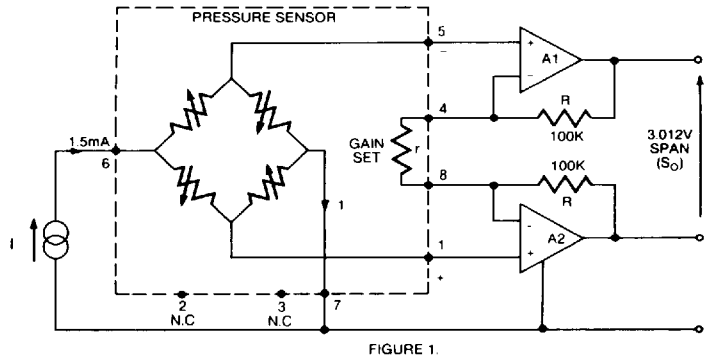

FIGURE 1.

Ordering Information

151 - 005 G

- G — Type (S=Sealed Gage, A=Absolute, G=Gage)
- 005 — psi Range
- 151 — Model (151 or 154)

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